

What is claimed is:

1. A gesture recognition method comprising the steps of:
displaying an image on a touch surface;
5 detecting pointer contacts on said touch surface and examining said
pointer contacts to recognize multiple pointer contacts representing a gesture; and
when multiple pointer contacts representing a gesture occur, updating the
displayed image in accordance with said gesture.
- 10 2. The method of claim 1 wherein multiple pointer contacts representing a
gesture include multiple finger contacts on said touch surface.
3. The method of claim 1 wherein multiple pointer contacts representing a
gesture include a finger contact on said touch surface and an object contact on said touch
15 surface.
4. The method of claim 1 wherein multiple pointer contacts representing a
gesture include multiple object contacts on said touch surface.
- 20 5. The method of claim 1 wherein multiple pointer contacts representing a
gesture include multiple finger contacts on said touch surface, a finger contact on said
touch surface and an object contact on said touch surface, and/or multiple object contacts
on said touch surface.
- 25 6. The method of claim 1 wherein said gesture represents a right-click event.
7. The method of claim 6 wherein said right-click event is represented by a
first pointer contact on a displayed application, and a subsequent second pointer contact
adjacent said first pointer contact.

8. The method of claim 6 wherein said right-click event is represented by a first pointer contact on a displayed application, and a subsequent second pointer contact that occurs within a threshold distance of said first pointer contact and while said first
5 pointer contact is maintained.

9. The method of claim 1 wherein said gesture is represented by simultaneous pointer contacts on said touch surface.

10 10. The method of claim 9 wherein said simultaneous pointer contacts are simultaneous finger contacts on said touch surface.

11. The method of claim 9 wherein said simultaneous pointer contacts on said touch surface represent a scroll event, the direction of movement of the pointers over said
15 touch surface subsequent to contact on said touch surface determining the direction of scroll.

12. A gesture recognition method comprising the steps of:
detecting multiple pointers in close proximity to a touch surface to
20 determine if said multiple pointers are being used to perform a known gesture; and
when said multiple pointers are being used to perform a known gesture,
executing a command associated with said gesture.

13. The method of claim 12 wherein during said detecting, pointer contacts
25 with or close pointer hovers over said touch surface are detected to determine if a known gesture is being performed.

14. The method of claim 13 wherein said multiple pointers include multiple fingers, at least one finger and at least one object, and multiple objects in close proximity to said touch surface.

5 15. The method of claim 13 wherein during said detecting the multiple pointers are examined to determine if one of a number of known gestures is being performed, each known gesture being associated with a different command.

16. The method of claim 15 wherein the movement of the multiple pointers
10 relative to the touch surface determines the gesture being performed.

17. The method of claim 15 wherein the pointer type determines the gesture being performed.

15 18. The method of claim 15 wherein the movement of the multiple pointers relative to the touch surface and the pointer type determines the gesture being performed.

19. An input detection method in an interactive system capable of detecting movement of multiple pointers generally simultaneously within an input region, said
20 method comprising the steps of:
capturing images looking generally across said input region;
analyzing said images to detect multiple pointers within said input region;
when multiple pointers are detected, examining data associated with said multiple pointers to determine if the data represents an input gesture; and
25 when the data represents an input gesture, executing a command corresponding to the recognized input gesture.

20. A touch system comprising:
a touch surface to be contacted by at least one pointer;

at least one imaging device having a field of view looking generally across said touch surface; and

at least one processor communicating with said at least one imaging device and analyzing images acquired by said at least one imaging device to determine the location on said touch surface where pointer contacts are made, when said touch surface is contacted by multiple pointers, said processor examining said multiple pointer contacts to determine if said multiple pointer contacts represent a gesture and when said multiple pointer contacts represent a gesture, said processor executing a command associated with said gesture.

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21. A touch system according to claim 20 wherein a first pointer contact followed by a subsequent second pointer contact adjacent said first pointer contact represents a gesture.

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22. A touch system according to claim 20 wherein at least two simultaneous pointer contacts represents a gesture.

23. A touch system according to claim 20 wherein each gesture is represented by specified multiple pointer actions.

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24. A touch system according to claim 23 wherein each gesture is further represented by pointer type.

25. An interactive input system comprising:

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at least one imaging device having an input region within its field of view into which one or more pointers is moved to generate user input; and

at least one processor communicating with said at least one imaging device and analyzing each image acquired by said at least one imaging device to determine the action of pointers in said input region, said at least one processor

determining when multiple pointer actions within said input region represent a gesture, when said multiple pointer actions represent a gesture, said at least one processor executing a command corresponding to said gesture.

5 26. An interactive input system according to claim 25 wherein each gesture is further represented by pointer type.

27. In an interactive touch system, a method of simulating a right-click mouse event comprising the steps of:

10 detecting a first pointer contact on a touch surface that represents a left-click mouse event;

 detecting when a subsequent second pointer contact on said touch surface occurs within a threshold distance of said first pointer contact; and

 generating a right-click mouse event in response to said detected second
15 pointer contact.

28. The method of claim 27 wherein said second pointer contact must also occur during said first pointer contact in order for said right-click mouse event to be generated.

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29. The method of claim 28 wherein said second pointer contact must also occur to the right of said first pointer contact in order for said right-click mouse event to be generated.

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